

CrystalEYES[®]

User's Manual



STEREOGRAPHICS[®]

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Installation & Setup

Each pair of **CrystalEyes** eyewear includes two fresh batteries, which are installed at the factory. A compatible stereo computer graphics or video system must be available to check the operation of the eyewear. To activate the eyewear, unfold the temple pieces; to turn off the eyewear, fold the temple pieces. When not in use, fold your **CrystalEyes** eyewear with the temples laying flat across the back of the lenses for convenient storage. *Always fold the eyewear when not in use to maximize the battery life.*

Installing the StereoGraphics Emitter

StereoGraphics **CrystalEyes** requires the use of an infrared emitter in order to synchronize the eyewear in conjunction with the left and right image sequence on screen. The I/R receiver (located in the center of the eyewear) must be in line of sight and in range of the emitter for successful operation of CrystalEyes. Please consult the documentation accompanying your emitter for installation and operation details.

In all cases except for non-stereo-ready PCs, the system or graphics card manufacturer requires specific display settings to enable Stereo3D mode. Please consult the manual or vendor for your specific graphics subsystem to determine the proper settings for Stereo3D mode. For best results in using **CrystalEyes** with standard workstation displays, set the emitter slightly behind the top edge of the monitor, as shown in Figure 1. In addition:

- For EPRO, ESGI and ELR emitters, make sure the emitter is switched to the ON position. Depending on the emitter range needed, switch the emitter to either the high or low setting.
- The ENT emitter will switch on and off automatically whenever a sync signal is presented by the graphics card.
- Users of the EPC-2 must switch the emitter from BYPASS to STEREO MODE and set the emitter range separately.

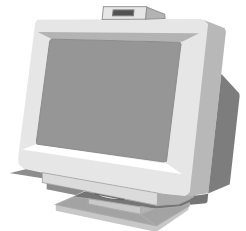


Figure 1. Display and Emitter

Prescription Glasses

If you normally wear prescription eyeglasses, place **CrystalEyes** over them. The eyewear will fit comfortably over most prescription eyeglass frames.

For more information on setting up your system, please refer to our website at <http://www.stereographics.com>

Specifications

Optics

Shutters:	liquid crystal
Transmittance:	32% typical
Dynamic Range:	1000:1 typical
Close Time:	Less than 0.2 milliseconds
Open Time:	Less than 3 milliseconds
Field Rate:	80 to 160 fields per second
Bright Mode:	Automatically selected
Infrared Sensor	
Angle of View:	90 degrees horizontal 140 degrees vertical

Weight

3.3 oz. (93 grams)

Controls

On/Off: Eyewear operation is switched on and off by unfolding and folding the eyewear temple pieces.

Bright mode. Both lenses automatically switch to full transparency for up to 8 minutes when shielded from infrared signals. Restoring the infrared signal returns the eyewear to full operation.

Batteries

Two 3 V lithium/manganese dioxide (NEDA 5004L), including:

Eveready	E-CR2032	Sanyo	CR2032
Maxell	CR2032	Seiko	CR2032
Panasonic	CR2032	Technacell	CR2032
Ray-O-Vac	CR2032	Varta	CR2032
Saft	LM2032	Duracell	DL2032

Maintenance

Your **CrystalEyes** eyewear will provide years of excellent viewing if properly cared for. As with any eyewear, take care to prevent scratching the lenses. Also, protect the electronic circuits within the eyewear from damage by excessive moisture or immersion in liquids.

Cleaning

CrystalEyes lenses have hard-coated plastic surfaces and if cared for properly will remain in good condition for many years. Using a soft cloth or lens tissue intended for plastic lenses, gently wipe the lens surface. A dry, clean chamois cloth also works well.

CrystalEyes eyewear lenses should receive the same care used for plastic eyeglass lenses except:

Do not immerse the eyewear in water or liquid. Avoid spraying cleaner directly on your eyewear. The use of excess moisture can destroy the electronic circuits within the eyewear and may invalidate your warranty.

Batteries

Two 3-volt lithium/manganese dioxide “CR2032” or equivalent (NEDA 5004L) batteries, which are shipped in **CrystalEyes**, provide power to the eyewear. Batteries are installed in the eyewear at the factory. When installed in the product, the batteries have a storage life of over three years or will run the eyewear for more than 160 hours in normal use.

To replace the batteries, first fold the temple pieces of the eyewear. Locate the battery holder at the hinge-point of the left temple piece. Using a paper clip or ballpoint pen for help (as shown in Figure 2), swing the battery holder out from the eyewear and remove the existing batteries, noting their orientation.

Place both fresh batteries into the battery holder making sure that the positive (+) sides of each battery face in opposite directions, as indicated. Each position will accept its battery in only one orientation. Follow the installation instructions located inside the battery holder.

If the holder will not close easily, ***do not force it!*** Check the batteries to make certain they are seated in the holder and oriented in opposite directions. If the battery holder will not close, reverse both batteries and try again.

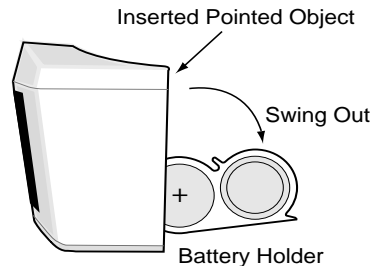


Figure 2 . Battery Replacement

FCC Compliance

This equipment generates and uses radio frequency energy, and if not installed and used properly, that is in strict accordance with the manufacturer’s instructions, may cause interference to radio and television reception. The equipment has been tested and found to comply within the limits for a Class B computing device in accordance with the specifications in Subpart B of Section 15 of the FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference to radio or television reception, which can be determined by turning the equipment on and off, will not occur. The user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that the equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio / television technician for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful:

“How to Identify and Resolve Radio-TV Interference Problems”

This booklet is available from:

US Government Printing Office
Washington, D.C. 20402
(Stock No. 004-000-0345-4)

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate the equipment.

Warranty Information

StereoGraphics’ Warranty/Certificate of Ownership and Warranty Registration are enclosed. If lost, visit our web site at <http://www.StereoGraphics.com> to see warranty and/or register online.